

- 5 1. Coupling system between high-voltage electrical equipment composed of a connector or union assembly (1) that inserts in female connectors (5) of the high voltage equipment (4) which comprises an insulating shell (2) inside which are housed conducting elements, whose external surface is partially covered by a conducting or semi-conducting layer (3), characterised in that it incorporates a mechanical protection device (6) independent of the union assembly (1) and the connectors (5) and  
10 disposed surrounding the semi-conducting layer (3) and in contact with said semi-conducting layer (3).
2. Coupling system between high-voltage electrical equipment according to claim 1, characterised in that the protection device (3) consists of a conducting ring connected to earth.
- 15 3. Coupling system between high-voltage electrical equipment according to claim 2, characterised in that the conducting ring connected to earth is metallic.
- 20 4. Coupling system between high-voltage electrical equipment according to claim 1, characterised in that the protection device incorporates an inductive current sensor.
5. Coupling system between high-voltage electrical equipment according to claim 4, characterised in that the current sensor consists of a Rogowski coil.
- 25 6. Coupling system between high-voltage electrical equipment according to claim 4, characterised in that the current sensor consists of a winding (8)

about a magnetic core (7).

7. Coupling system between high-voltage electrical equipment according to the previous claims, characterised in that the protection device (6) incorporates a capacitive voltage sensor.
- 5 8. Coupling system between high-voltage electrical equipment according to claim 1, characterised in that the protection device (6) encompasses all the connectors (1) of the phases of the coupling system between high-voltage equipment.
- 10 9. Coupling system between high-voltage electrical equipment according to claim 8, characterised in that the protection device (6) consists of a conducting ring connected to earth.
- 10 10. Coupling system between high-voltage electrical equipment according to claim 9, characterised in that the conducting ring connected to earth is metallic.
- 15 11. Coupling system between high-voltage electrical equipment according to claim 8, characterised in that it comprises a current sensor that externally encompasses all phases.
- 20 12. Coupling system between high-voltage electrical equipment according to claim 11, characterised in that it comprises a current sensor for each phase.
13. Coupling system between high-voltage electrical equipment according to claims 8, 11 and 12, characterised in that it incorporates voltage detection for each phase of the main circuit.